CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.08/KNP/CEMENT/2013-14

Date: 10.02.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. Krishnagowda N. Patil,** Contractor, Bangalore.
NAME OF THE WORK	:	Construction of culvert, CC drain and cement concrete patch work in BB Nagara in Ward No. 08 (Kodigehalli), Kodigehalli Sub Division, BBMP, Bangalore.
REFERENCE	:	EE/BTP/BBMP/E-PMT/256/2013-14 Dated: 31.01.2014
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4)	28.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5)	195 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	465 Minutes	Not More than 600 Minutes
3	Soundness by the Le-Chatelier method	IS-4031 (Part 3)	1 mm	Not more than 10 mm

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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.08/KNP/SAND/2013-14 : 10.02.2014

TEST REPORT ON FINE AGGREGATES (SAND)
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Mr. Krishnagowda N. Patil,** Contractor, Bangalore.

Name of Work : Construction of culvert, CC drain and cement concrete patch work in BB Nagara in Ward No. 08 (Kodigehalli), Kodigehalli Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/256/2013-14 Dated: 31.01.2014

Date of Testing : 10.02.2014

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	78	3.90	3.90	96.1	90-100
2.36	252	12.60	16.50	83.5	75-100
1.18	498	24.90	41.40	58.6	55-90
600 Micron	455	22.75	64.15	35.9	35-59
300 Micron	504	25.20	89.35	10.7	8-30
150 Micron	148	7.40	96.75	3.2	0-10

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Job No.: CTCE/BBMP/W.No.08/KNP/AGG/2013-14 : 10.02.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Mr. Krishnagowda N. Patil,** Contractor, Bangalore.

Name of Work : Construction of culvert, CC drain and cement concrete patch work in BB Nagara in Ward No. 08 (Kodigehalli), Kodigehalli Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/256/2013-14 Dated: 31.01.2014

Date of Testing : 10.02.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25200**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	968	3.84	3.84	96.16	95-100
20	16325	64.78	68.62	31.38	30-70
10	5024	19.94	88.56	11.44	10-35
4.75	2375	9.42	97.98	2.02	0-5

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Job No.: CTCE/BBMP/W.No.08/KNP/AGG/2013-14 : 10.02.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Mr. Krishnagowda N. Patil,** Contractor, Bangalore.

Name of Work : Construction of culvert, CC drain and cement concrete patch work in BB Nagara in Ward No. 08 (Kodigehalli), Kodigehalli Sub Division, BBMP, Bangalore.

Reference : EE/BTP/BBMP/E-PMT/256/2013-14 Dated: 31.01.2014

Date of Testing : 10.02.2014

Material : 20mm Aggregates

Total Wt. of Aggregates in gms= **5000**

Tabel - 1

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
40	0	0	0	100	100
20	175	3.50	3.5	96.50	95-100
10	3268	65.36	68.9	31.14	25-55
4.75	1342	26.84	95.7	4.30	0-10

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.08/KNP/STEEL/2013-14 17.02.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Krishnagowda N. Patil,** Contractor, Bangalore.
Name of the work	:	Construction of culvert, CC drain and cement concrete patch work in BB Nagara in Ward No. 08 (Kodigehalli), Kodigehalli Sub Division, BBMP, Bangalore.
Reference	:	EE/BTP/BBMP/E-PMT/256/2013-14 Dated: 31.01.2014
Date of Test	:	17.02.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	514	557	13.30	O.K	O.K

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Job No.: CTCE/BBMP/W.No.08/KNP/STEEL/2013-14

17.02.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Krishnagowda N. Patil,** Contractor, Bangalore.
Name of the work	:	Construction of culvert, CC drain and cement concrete patch work in BB Nagara in Ward No. 08 (Kodigehalli), Kodigehalli Sub Division, BBMP, Bangalore.
Reference	:	EE/BTP/BBMP/E-PMT/256/2013-14 Dated: 31.01.2014
Date of Test	:	17.02.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	12	0.89	517	560	13.55	O.K	O.K

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Job No.: CTCE/BBMP/W.No.08/KNP/CUBE/2013-14

25.03.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	: **Mr. Krishnagowda N. Patil,** Contractor, Bangalore.
Name of the work	: Construction of culvert, CC drain and cement concrete patch work in BB Nagara in Ward No. 08 (Kodigehalli), Kodigehalli Sub Division, BBMP, Bangalore.
Reference	: EE/BTP/BBMP/E-PMT/256/2013-14 Dated: 31.01.2014
Sample ID	: RCC Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.02.2014	25.03.2014	8.263	483.6	21.49
2	25.02.2014	25.03.2014	8.397	502.7	22.34
3	25.02.2014	25.03.2014	8.425	523.4	23.26

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07.04.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	: **Mr. Krishnagowda N. Patil,** Contractor, Bangalore.
Name of the work	: Construction of culvert, CC drain and cement concrete patch work in BB Nagara in Ward No. 08 (Kodigehalli), Kodigehalli Sub Division, BBMP, Bangalore.
Reference	: EE/BTP/BBMP/E-PMT/256/2013-14 Dated: 31.01.2014
Sample ID	: Road Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	10.03.2014	07.04.2014	8.165	473.9	21.06
2	10.03.2014	07.04.2014	8.278	490.8	21.81
3	10.03.2014	07.04.2014	8.353	503.6	22.38

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